

16 June 2023

Kia ora [REDACTED]

**Your Official Information Act request, reference: GOV-025463**

Thank you for your email of 1 June 2023, asking for the following information under the Official Information Act 1982 (the Act):

*I would like to request information that explains ACC's diagnostic imaging / radiology pricing decisions. In particular, any documents or reports prepared by any external parties / consultants in the last 12 months that looks at pricing and cost trends in overseas markets, along with the scope or terms of reference for these reports.*

**We have identified one document within scope of your request**

Please find attached the 'ACC High-Tech Imaging Pricing Methodology Review', dated November 2022. This is the first component of the review of pricing of high-tech imaging services.

Further work on the review of pricing of high-tech imaging services is ongoing. We anticipate the next component of the review to be finalised by, or shortly after, the end of the 2022/23 financial year.

**As this information may be of interest to other members of the public**

ACC has decided to proactively release a copy of this response on ACC's website. All requester data, including your name and contact details, will be removed prior to release. The released response will be made available [www.acc.co.nz/resources/#/category/12](http://www.acc.co.nz/resources/#/category/12).

**If you have any questions about this response, please get in touch**

You can email me at [GovernmentServices@acc.co.nz](mailto:GovernmentServices@acc.co.nz). If you are not happy with this response, you can also contact the Ombudsman via [info@ombudsman.parliament.nz](mailto:info@ombudsman.parliament.nz) or by phoning 0800 802 602. Information about how to make a complaint is available at [www.ombudsman.parliament.nz](http://www.ombudsman.parliament.nz).

Ngā mihi



Sara Freitag  
**Acting Manager Official Information Act Services**  
Government Engagement



## ACC High-Tech Imaging Pricing Methodology Review

22 November 2022



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OFFICIAL INFORMATION ACT

# Introduction & Scope

The following report offers an independent review of the methodology used to set High-Tech Imaging prices offered by ACC to market participants. This report considers the drivers of recent cost increases and determines if the pricing methodology is fit-for-purpose in today's market.

## Introduction

The Accident Compensation Corporation (ACC, or you) funds a range of High-Tech Imaging (HTI) services in both the private and public health systems for individuals who have suffered accidental injuries. To deliver this service, ACC engages a range of providers, paying a set price outlined in the HTI service contracts.

The methodology used to determine imaging prices was developed in 2009 and includes yearly price adjustments using weighted indices. Recently there has been an increase in volume and expenditure for HTI service contracts. This report offers an independent review of the methodology used to set the HTI prices offered to providers.

## Scope

We have undertaken a review of the methodology used to set High-Tech Imaging prices paid by ACC to approved service providers. Our scope, which was agreed with you, was designed to cover the following areas:

Establish whether the pricing methodology for High-Tech imaging services is fit for purpose against a set of agreed criteria

- Review the current model, supporting documentation, methodology and approach for the pricing of services
- Comment on any gaps and issues in the overall process
- Provide a written recommendations for next steps

## Limitations of Scope

We highlight the following limitations:

- We have not performed cost benchmarking
- We have not commented on or made recommendations regarding the pricing of services to the market

## Limitations and Restrictions

In connection with the preparation of this Report we were provided with a number of documents that provided the historical pricing information and other supporting information. We have not traced back data and information back to original sources. Our Review is limited to the information provided to us. We have made our best endeavours to request information from ACC.

Our review does not include verification work nor constitute an audit or a review engagement in accordance with standards issued by the XRB and accordingly should not be relied upon as if it had been carried out in accordance with those standards. This Report does not express any opinion, or provide any assurance, or the adequacy of pricing methodology.

We are not lawyers, technical or commercial advisers.

We have relied on ACC management and the supporting information that has been provided to us.

# Background

ACC is responsible for administering New Zealand's no-fault accidental injury compensation scheme which provides a range of entitlements to injured people including treatment and diagnostic costs, including High-Tech Imaging.

## Background

The provision of HTI is a key tool used for both diagnosis and determining treatment options for many injuries covered by ACC's no-fault accidental injury compensation scheme. HTI specifically refers to a set of advanced radiological imaging modalities including MRI, CT, nuclear medicine, and doppler ultrasound. ACC funds access to over 130 different radiological scans or procedures across these modalities which meet the definition of High-Tech.

To deliver a comprehensive nationwide service ACC holds contracts with multiple radiological service providers across the public and private health systems. The balance between private and public provision largely relates to public capacity pressures and the availability of expensive imaging machines in these settings. The price offered to any service provider is determined by the ACC's High-Tech Imaging services contracts, which offer a fixed price for each of the funded scan types.

The pricing methodology that informs these contracts was developed by an internal model developed in 2009 and offers scheduled yearly price increases. The contracts were rebased in 2009, and are available to any supplier who holds the appropriate credentials and meets a set of regulatory criteria.

Importantly, ACC does not directly approve image requests or constrain the number of scans they fund, instead measuring provider performance against a set of performance criteria. Key performance metrics include cost-effectiveness (services are necessary and appropriate), timeliness (services are undertaken within 10 days of approval), and reporting (accurate reports are sent to referring specialists and ACC within five days).

In 2021, ACC commissioned a review of its HTI services which included benchmarking of ACC pricing against comparable international jurisdictions. We highlight the following key findings:

- Total spending on HTI contracts increased from \$58.4m in 2014 to \$102.5m in 2021, an increase of 75.5%. During FY21 ACC exceeded its HTI contract budget by approximately \$9m. In the year ending 30 June 2022, the spend was \$110m.
- The growth in claims volumes is the main driver of cost increases over time, alongside an increase in the number of scans per claim. However, there has been shifts in the mix of scans delivered.
- The trend of increasing volume of imaging is seen across all imaging modalities, rather than any specific area.
- International price comparisons showed that in 2021 compared to ACC, Australia's Medicare scheme was paying out 44% less for an MRI and 39% less for a CT scan.
- In 2017 the price of an MRI scan in New Zealand was \$750, ahead of South Africa (\$500), the United Kingdom and United Arab Emirates (\$450), Switzerland (\$310) and the Netherlands (\$190). In the countries studies only the USA had a higher cost at \$1,430.

This report offers an independent review of the methodology used to set prices in HTI service contracts. We outline the key drivers of recent price increases and offer a set of recommendations to better understand the pricing of the service.

# Pricing Methodology | Overview

The components of service delivery are multiplied by a conversion factor to establish a price paid to the market. This component costing, or relative value units is commonly used for radiology services.

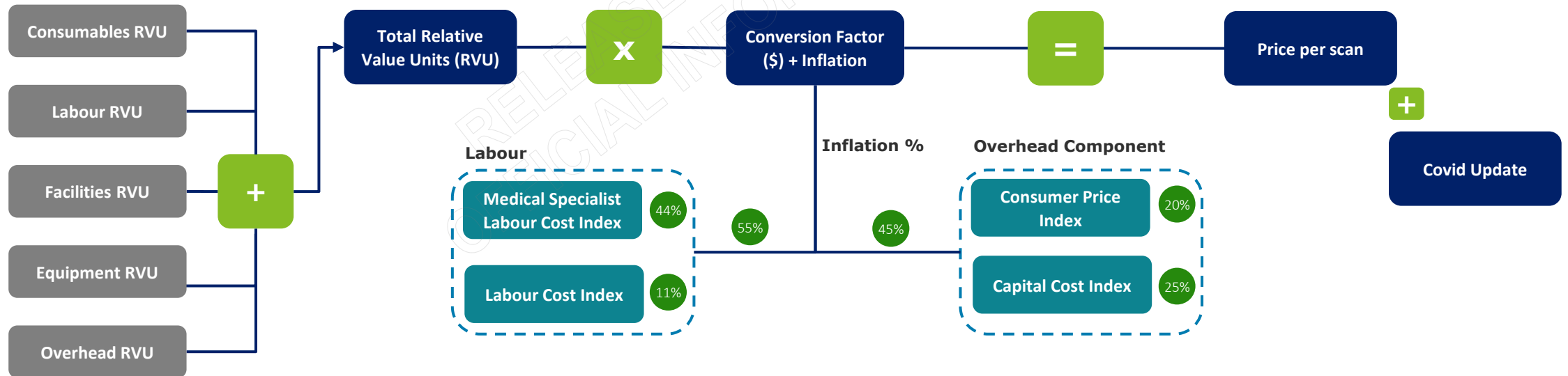
## Overview

To set the pricing for HTI service contracts, ACC developed an internal model in 2009. Since this modelling, prices have been increased annually using weighted indices.

In 2020, a COVID pricing update captured the additional effort required to operate under COVID precautions and local health settings.

## Pricing methodology

Relative Value Units (RVUs) of component costs or activities, are multiplied by a conversion factor to establish a price paid to the market. The RVUs have remained static since 2003. The prices were re-based in 2009, via resetting the dollar value of the conversion factor. The conversion factor, and subsequently the price, are re-tested and adjusted annually by applying a combination of four indices.

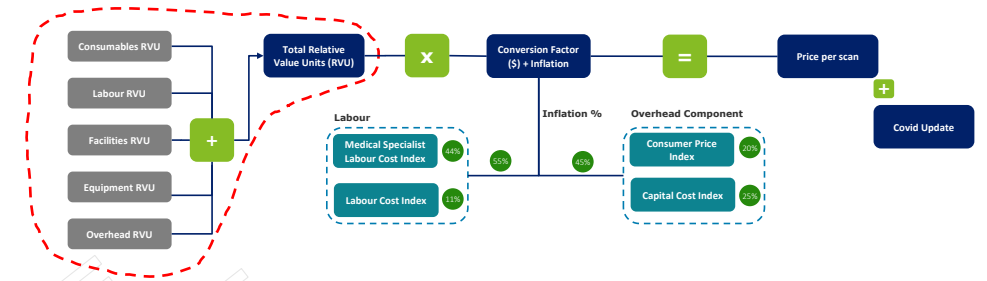


RVU factors capture the consumption of resources, on a per scan basis

The Conversion Factor is a multiplier to gross up the RVUs to a dollar price per scan. The conversion factor has weighted indices applied annually. The Conversion Factor is the same for all procedures.

# Pricing Methodology | RVUs

Relative Value Units reflect the resources required to complete the services



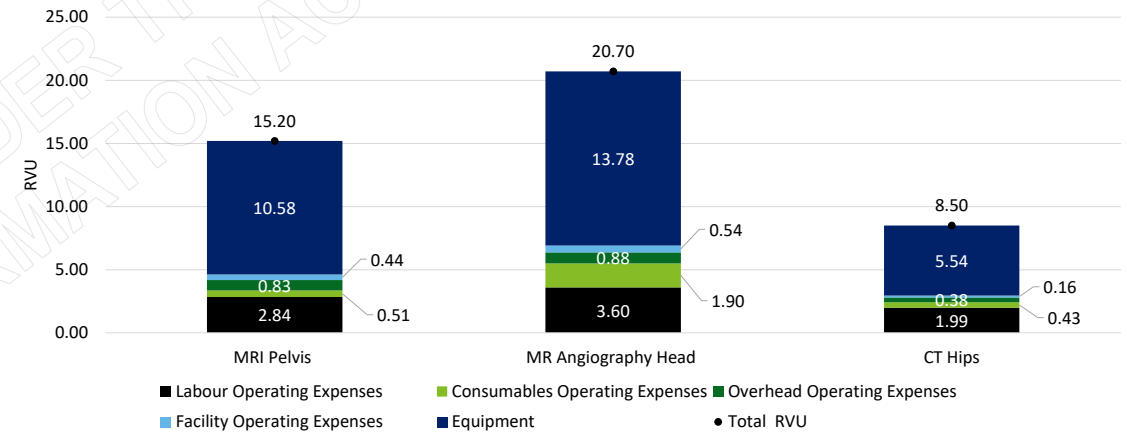
## Relative Value Units (RVUs)

The five components of the RVU capture the activities and allocated costs of delivering the HTI services. RVU as a methodology is a common approach to capture the efforts of radiologists<sup>1</sup> (Pitman, et al, 2009). The RVUs cover effort of radiologists, supporting staff, consumables, equipment, facilities costs and an allocation of overhead costs.

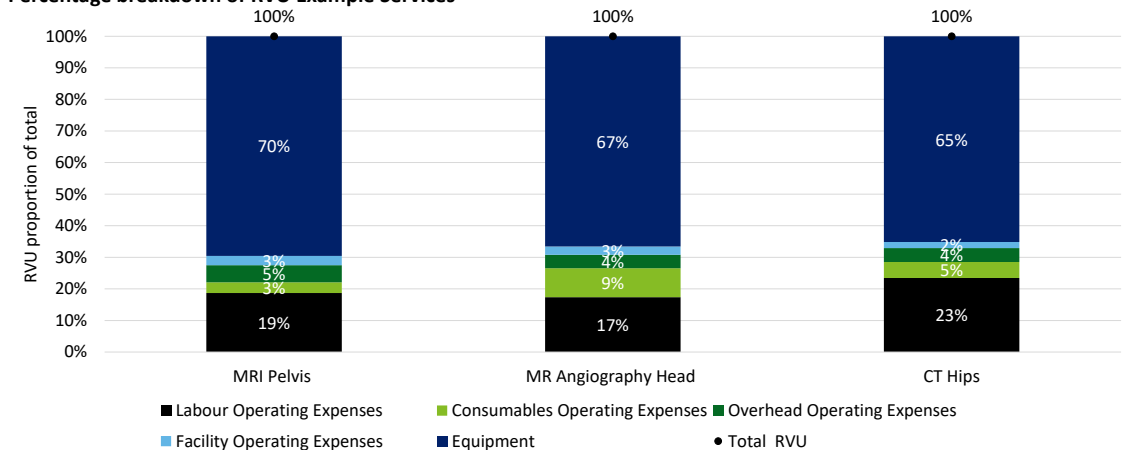
The RVUs vary by service across the 134 services as at 1 August 2021. The higher the use of resources by the service, the higher the RVU. The adjacent charts show the significant component of equipment (machines) used in MRI and CT scanning, with labour resources contributing around 20% of the total RVU value.

In 2009 ACC undertook scenario modelling of the RVUs. This modelling adjusted key assumptions over time, with a focus on changing RVUs. We note the RVUs applied in the pricing in 2021, have been held constant by ACC since 2003.

Total RVU Example Services



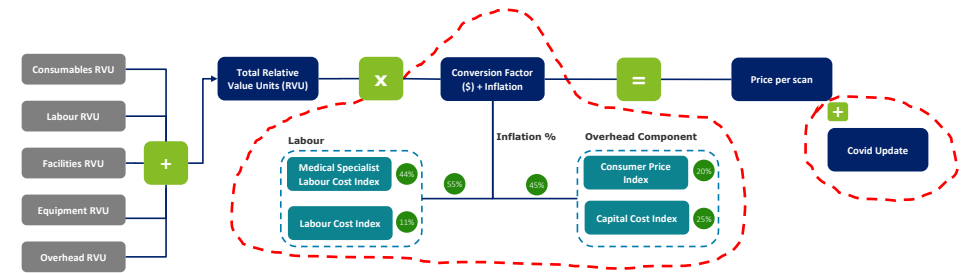
Percentage breakdown of RVU Example Services



1. Pitman, A., et al (2009). The Royal Australian and New Zealand College of Radiologists (RANZCR) relative value unit workload model, its limitations and the evolution to a safety, quality and performance framework

# Pricing Methodology | Conversion Factors & Covid

The conversion factor is a dollar figure, updated annually by weighted indices.



## Conversion Factor

To establish the total price for the service, the RVU are multiplied by a conversion factor. This factor was established alongside the 2009 prices. Each year, the conversion factor is updated using weighted indices. The conversion factor is the same for each scan service.

The following table captures the annual adjustments over the past six years, noting the conversion factor was held constant for 2022 pricing.

	Conversion Factor					
	2017	2018	2019	2020	2021	2022
\$ excl. GST	48.82	49.71	50.78	51.27	52.61	52.61
% change		1.8%	2.1%	1.0%	2.6%	0.0%

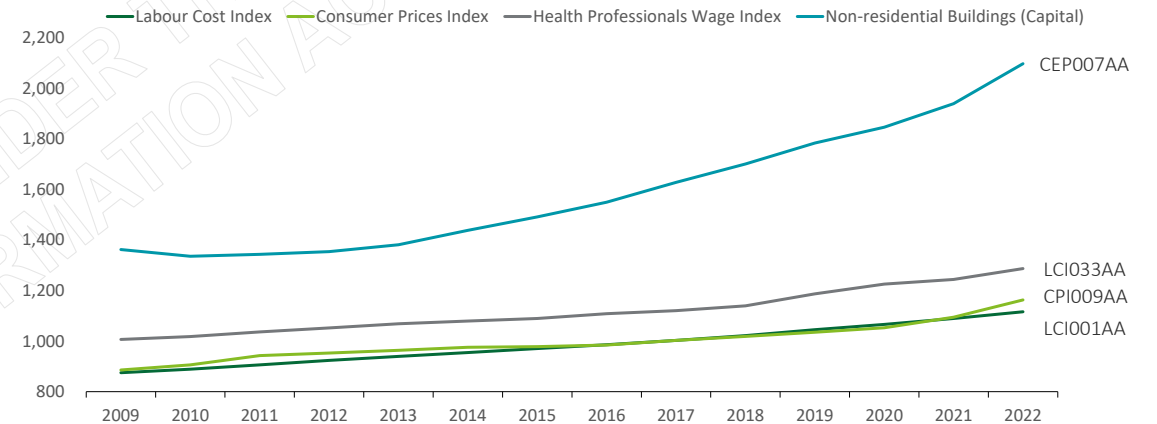
## Weighted Indices.

Four indices are used to modify the conversion factor, as a proxy to capture market movements in price for services. Labour indices make up 55% of the change in the conversion factor each year. Medical specialist labour cost index covers radiologists, nurses and medical staff. The medical specialist index is 44% of the annual change. The labour cost index is intended to cover general staff, making up the remaining 11% of the change.

The consumer price index and capital cost index are used to reflect changes in cost for facilities, consumables, equipment and overhead costs. These changes are weighted at 45% of the total annual change. (CPI: 20% and CCI: 25%)

Using the four indices shown in the adjacent chart, we were unable to replicate the above annual changes. At the time of issuing this Report there is no documentation available to provide the details of the historical uplifts, nor rationale for the weightings used.

All indices



## Covid update

In response to COVID-19, there were changes to standard processes (e.g. time spent per scan, cleaning) and additional consumables (PPE gear), price adjustments were made to fund the additional costs in 2020.

## Criteria for Review | Introduction

To establish whether the pricing methodology is ‘fit for purpose’ we have defined the following criteria and selected the most appropriate for this review.

Criteria & definition	Selected for this review	Rationale
• <b>Repeatability</b> – is the process is able to be repeated, annually?	✓	• Considers how consistent and predictable the process is
• <b>Transparency</b> – is the process understood and clear?	✓	• Considers how well the approach is accepted and delivered
• <b>Innovation</b> – does the process allow for market change and incentivise innovation?	✓	• Considers how well the methodology incorporates change
• <b>Equitable</b> – is the process equitable to all participants?	X	• No stakeholder engagement nor benchmarking was undertaken as part of this review
• <b>Efficient</b> – does the process deliver value for money?	X	• No price benchmarking was undertaken as part of this review
• <b>Effective</b> – is the process well run from an operations perspective?	X	• No stakeholder engagement was undertaken as part of this review
• <b>Strategic Fit</b> – how well the approach fits within the organisation	X	• ACC are currently developing their pricing framework

# Criteria for Review | Assessment

To establish whether the pricing methodology is ‘fit for purpose’ we have defined the following three criteria and rated the methodology against the criteria using a simple, three point scale.


Criteria & definition	Rating	Comments
<ul style="list-style-type: none"> <li>• <b>Repeatability</b> - is the process is able to be repeated, annually?</li> </ul>		<ul style="list-style-type: none"> <li>• An anticipated and consistent process supports the sustainability of service provision, with suppliers receiving price certainty for their work.</li> <li>• ACC annually updates the pricing via a variation letter with providers. The letter lists all procedures and prices paid to suppliers.</li> <li>• ACC applies a weighted index to the prices, as a proxy for movement in costs. This has been completed annually since 2009, except for 2022 when prices were held constant.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Transparency</b> – is the process understood and clear?</li> </ul>		<ul style="list-style-type: none"> <li>• The RVU approach for measuring the effort of radiologists performing imaging and scans is a well regarded approach. The approach is used for pricing these services internationally.</li> <li>• The prices were set in 2009, generating the conversion factor used to multiply the RVU to a price. The subsequent prices have been updated using weighted indices. These values are communicated to providers annually.</li> <li>• However, through the course of this review we note the process and methodology is not well documented, with institutional knowledge being lost over time. There is limited information on how the RVUs and corresponding Conversion Factors (2009) have been determined.</li> <li>• Whilst we understand that there is a process that calculates the annual price adjustment through the use of StatsNZ indices, at the time of this review, there is no documentation available to provide the details of the historical uplifts nor rationale for the weightings used.</li> </ul>

Rating scale



## Criteria for Review (cont.)

To establish whether the pricing methodology is ‘fit for purpose’ we have defined the following three criteria and rated the methodology against the criteria using a simple, three point scale.

Criteria & definition	Rating	Comments
<ul style="list-style-type: none"> <li>• <b>Innovation</b> – does the process allow for market change and innovation?</li> </ul>		<ul style="list-style-type: none"> <li>• Total spend and procedure volume for this service have increased significantly between 2009 and today, suggesting higher utilisation of equipment. Over this time, there has been a rise in use of digital files, referral patterns have changed, and the use of HTI in medical practices has moved on from an ‘emerging field’ of medicine. A wide range of entities provide the HTI services to ACC, including sophisticated entities with significant commercial resources, public hospitals and smaller scale businesses.</li> <li>• For service contracts of this nature, we would expect to find mechanisms or processes that will allow pricing risks to be reviewed on a periodic basis. We would also expect commercial arrangements to incentivise either party to innovate to changes in practice, new technology, changes in market demand and economic factors for a more efficient outcome. There is no known process or mechanism that incentivises the participants to innovate in response to changes in the delivery of services.</li> <li>• Based on artefacts and discussions with management there has been no formal review performed since 2009, and no mechanism that requires a periodic review of the pricing terms. However, we do note the ACC letter includes a statement that ACC has to right to make changes to the pricing. The price paid to market participants is tested annually.</li> </ul>

Rating scale



# Findings & Recommendations

The pricing methodology is based on an internationally accepted approach. However, the price has not been checked against market costs since 2009. Since then, there have been changes in key drivers of HTI services.

## Findings

While the approach used for pricing the HTI services is a globally validated approach, the elapsed time between re-testing market assumptions means there may have been a divergence from the cost to deliver the services and pricing paid.

Annual updates via weighted indices will have helped to maintain the price with the underlying costs. However, there have been changes in HTI services since the underlying approach for costing the services was set. These changes include:

- significant increase in volume of scans,
- increased utilisation of machines,
- technological advancements in scanning machines and equipment (such as digital files),
- changes in costs of technology,
- referral patterns, and
- patient service expectations.

Without any pricing checks with the market, the price paid by ACC is unlikely to reflect the innovation over recent times, nor the increase in utilisation of equipment given the uplift in volumes.

Limited documentation was available to describe the approach used by ACC to set the prices. This document plays back our understanding from files provided, and conversations undertaken. We thank the ACC team for the information shared.

## Recommendations

- Undertake sector engagement about sustainability of the services, and pricing
- Benchmark the prices and relative value units to test ACC is paying a fair price. This could be undertaken via:
  - a market process with current providers,
  - information from hospitals running equivalent services, or
  - Compare with offshore providers (noting the limitations of operating in a different market and health care sector).
- Test the most appropriate indices are used to adjust the annual conversion factor, and the weightings are appropriate.
- Investigate opportunities for innovation in the delivery of HTI services, such as the increasing utilisation of the machines and consider how on-going incentives may be incorporated into the contract.
- Capture and document the process and underlying assumptions of the pricing approach more completely.